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COR 0143
Copy 1 of 8

10 September 1958

25X1

MEMORANDUM FOR: Special Assistant to the Director
for Planning and Development

SUBJECT: CORONA Operational Items to be Discussed at BMD and LMSD

REFERENCE: COR 0103

1. During the forthcoming visit to BMD on 15 and 16 September followed by a visit to LMSD on 17 September, many items of operational concern will be discussed. The main purpose of the discussions at the above two places will be to get underway the formulation of operational plans and procedures considered necessary for the efficient operational exploitation (consistent with cover and security considerations) of the CORONA vehicle. Set forth below are certain subjects and areas which, it is felt, should be considered and, if applicable, covered by procedures or directives. As there are many technical implications which bear on operational capabilities, as well as flexibility, at this writing, it is not known to what extent target cloud cover alone can or should dictate timing of satellite launchings. At the meetings during the week of 15 September, it is expected that a clear indication of the various restrictions will be obtained, following which, appropriate procedures can be finalized. The extent to which these considerations will affect preparation of a final draft of the Operations Order as indicated in Col. Sheppard's cable is not known. It is entirely possible that there may be sufficient disagreement between technical and operational interests at the primary meeting on 15-16 September so as to delay final resolution of some points.

2. Operational control procedures and reports should follow somewhat along the lines indicated below. Since it is understood that Headquarters' participation in the control of CORONA launchings will be done through the existing operations control room, insofar as is practicable, procedures affecting CORONA will be designed in parallel to those used in CHALICE. In this respect, a standardized procedure similar to the [redacted] will be developed, as appropriate. Secure communications are being provided. 25X1

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a. Launch schedules -- A procedure to establish schedules and control messages will be developed along the following lines. It is pointed out that the time periods chosen are arbitrary and may change, depending on technical considerations.

(1) Long range schedule -- This schedule should be established as far in advance as possible. It is thought this should be approximately a six month forecast of launch activity and will be based on:

(a) Contractors' estimate of vehicle availability
(b) Launch pad availability
(c) Climatological studies for all weather factors.

At this time, a target DATE within each MONTH should be set to serve as a common reference.

(2) Thirty day alert -- It is felt that by 30 days before the scheduled launch date, all material factors affecting the tentative launch should be known. If appropriate, a new date should then be established as the target day.

(3) Ten day alert -- Approximately ten days prior to target date and granting all material factors are favorable, a general weather forecast of all weather factors should come into play. If at that time the forecast is such that all pertinent conditions are forecasted to be favorable, the operational count down should then commence. At this time, the launch time on the target date should also be established.

(4) Daily alert confirmation -- During the last five days a daily in commission report will indicate whether, mechanically, the launch schedule can be met. Also, beginning at T-5 days, weather forecasts for the target time will be furnished Project Headquarters by WECEN. This will be in the same manner as cloud cover forecasts are given for CHALICE flights.

(5) Twelve hour alert -- At T-12 hours, based on the latest weather forecast, approval will be given to continue the final fueling operations and other technical preparations which occur during this period.

(6) Go-no-go -- At approximately T-6 hours or prior to the final acid refueling, the final approval, delay or cancellation will be given. If at any time during the count down a delay is introduced, all subsequent reports and directives would then revert to the appropriate time schedule based on the new date.

b. Launch report -- This report would originate at the Palo Alto Control Center and would include all pertinent information concerning the success or failure of a launching.

c. Inflight reports -- At periods to be determined later, progress reports will be submitted with information as appropriate.

d. Recovery report -- This would briefly describe the success or failure of recovery and/or condition of recovered pod.

e. Mission report -- This would be a complete report of all aspects of the particular mission, as may be appropriate.

f. Track overlay -- If it is possible to have tracked the actual path which the vehicle made over the earth, an overlay of these plots as they apply to the target area will be needed to assist in film plotting.

3. The following is a list of subjects for which it is felt SOP's should be developed. Here again, technical considerations may modify or nullify the applicability of such proposals.

a. Weather considerations -- Launch and recovery weather criteria will be discussed to get an idea of how much latitude we can expect in these areas. This will then give a clear indication of how much priority we can give to cloud cover considerations.

b. Orbit azmith selection -- Assuming that orbit azmith, as well as time in orbit, can be controlled accurately, it then appears that in order to get wider ground coverage, a change in launch azmith would be necessary. It is intended that this area be discussed with the LMSD people. If possible, such considerations as the lead time necessary to change launch azmith as well as any penalties which may accrue will be considered.

c. Camera capability -- Since, as a general rule, cloud free weather conditions occur more often in the early morning hours, the minimum acceptable sun angle which the camera can accommodate will be determined.

d. Mission numbers -- A system for the assignment of mission numbers will be discussed. Such mission numbers will be similar to our CHALICE type numbers and will have the same general purpose; that is, to serve as a common reference for use in photo identification or other reference to the particular launching involved. Although an arbitrary numbering system could be developed prior to the meeting, this is being delayed in the event there is some standard system within the missile community to which we should conform.

e. Common Map Projection -- For use in computing orbit tracks and other references to geography, discussions will be held with BMD and LMSD people for the purpose of establishing a common map projection. Experimentation with various map projection reveals a considerable variation from one to another.

f. Orbit azmith accuracy -- As an orbit track error of 1° will represent approximately 25 nm track displacement at 50° north latitude, the LMSD people will be asked to give an indication of the accuracy of their orbit track predictions.

g. Orbit time accuracy -- As it now stands, the orbit time is predicted to be 88 minutes. LMSD will also be asked to give an opinion of the accuracy of the orbit time prediction as, here again, a significant orbit time error will displace the predicted ground track appreciably. For example, if the orbit time was 30 seconds in error from that predicted, at the western edge of the USSR, (or after 10 orbits) this would result in approximately 30-40 miles error from the track prediction. This represents the error on the first day's orbit.

h. Film handling -- If time permits and the proper people are available, a discussion will be held concerning handling the film after recovery. This will include, mainly, by whom and where the pod will be opened.

4. Regarding paragraph 2 of reference, the matter of security incident to initiating climatological studies has been discussed with [redacted] and 25X1

25X1 [redacted] It is felt this could be done very easily by direct contact with Col. Gaertner at Headquarters, AWS. This will require a briefing for Col. Gaertner and possibly one or two other senior officials within AWS. It is then considered feasible that Col. Gaertner could lay the requirement for such studies and forecasts as are necessary under the guise of an enlarged CHALICE requirement. This should satisfy the people at the working level who are active in CHALICE matters. It could be further explained to them that this is a new attempt to conduct CHALICE operations, simultaneously, on a USSR-wide basis, thus explaining the need for studies and/or forecasts of the whole country at the same time.

5. Regarding paragraph 4 of reference, the need for an administrative communications link between the Palo Alto area and Headquarters will be investigated during the forthcoming trip. Assuming the need is justified, the appropriate general physical location will be selected. [redacted] 25X1 advises that approximately 30 days is a comfortable lead time to establish a facility at any location we may select.

6. As indicated in reference memorandum, you may wish to discuss this memorandum with the undersigned and [redacted] 25X1 who is to represent this division at the meetings next week. This memorandum has 25X1 been coordinated with [redacted]

25X1

[redacted]

Director of Operations

25X1 [redacted]

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2 - Dep Dir
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